

Reflection of Remittances on Advancement of REM & ICTs sectors in developing countries

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Abstract

The latest information and communication technologies (ICTs) are becoming popular all around the world because of their astonishing speed. As this technology was perceived as facilitating utensils as for the cost-effective growth and development, exclusively in economic backgrounds in the back word countries. They were comparatively easy and lowest in cost to embrace these technologies. In the world of globalization, the transformation between interconnected income variation and the growth rate of saving were explained through these technologies. The main aim of technology and science is to bring these technologies into organizations and to trained the employees to use these technologies more effectively

Propose: The Study aims at investigating the Reflection of remittances on economic in general and on ICTs with real-estate market REM sectors in particular. A little education has addressed the importance of remittances of expatriates to their countries. The current research examines the influence of expatriates on REM & ICTs sectors in Jordan.

Methods: The study has adopted analytical approaches to investigate the impact of Jordanian remittances on the investment of REM & ICTs sectors in Jordan.

Data sources and tools : Jordanian central bank, Ministry of labour, World Bank, The following tests were applied, namely: Dickey-Fuller (ADF) for testing the stillness of the time series model to the variables of the study, CUSUM of Square test for investigating the stability of the model parameters,

Results: The study has a positive impact on REM & ICTs sectors, building, infrastructure. The study recommends formulating strategies and rules for Jordanian expatriates in order to invest their remittances in long term developmental investments, develop alternative funding sources in case if remittances have been suspended and diverse investment climates have been provided for Jordanian expatriates.

Keywords: remittances, REM, ICTs, growth, Jordan, IT infrastructure

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I. Introduction

The progress of technologies and interminably continuous evaluation from the beginning of the history of human beings. The ICTs Techniques has been started in the era of 2000, and these technologies change the structure that can store the information on a large amount. In the previous century, the advancement of technologies and speed of transfer data relatively increased as compared to the earlier

technologies[1]. The technique involves the submission of science specifically for industrialized or profitmaking determinations and practices the scientific methods and resources to attain a profitable or for the manufacturing determination and making “revolutions” in the creations of machinery[2]. The different manufacturing processes would be used to enhance the fabrication of products as well as there quality and worth to compete with other

industries in the Markets, moreover to improve the profit for the company[3]. This technology is not as complicated as we think, and it can be easily bought and sell. O that the transference of this technology is easy to move and does not need strength to be done, and these technologies are easily transmitted from one to another nation[4].

The primary purpose of ICTs is to provide a safe structure for the effective dispersion of technologies in all areas of the digital economy of Jordan[5]. Therefore, inspiring savings are the leading source in the creation of the environment of business[6]. And this will be attained only by inventing institutional capacity and on it can also be obtained by working on the principles of decision making in this process. The policy is based on the following sectors, such as exploiting digital strategies to encourage the use of informational techniques[7]. The second is to attain the data saving and securing policy to protect the information policy. The third is to take the involvement of the private sector in the commencement and roles of knowledge station and post offices. Furthermore, to encourage the trade in areas of ICTs. In the fifth decrease, the consumption of paper in government sectors. In the six, take the policy of digitalizing in Jordan[8]

Otherwise The issue of Jordanian expatriates remittances receives considerable attention by researchers, officials, economic experts in Jordan due to the increase of Jordanian expatriates ratio abroad which, in turn, increase their returns, remittances, and their impact on Jordanian economy[9]. To illustrate, previous studies indicated that expatriates remittances impact revolves around investment and consumption. The investment remittances focus on preparing investment projects which play an important role in revitalizing macroeconomics through increasing the level of income and decreasing both poverty level and income inequality. Moreover, Jordanian expatriates improve

creditworthiness which, in turn enhance the capacity of state on lending from global financial marker with a better conditions.

II. Literature Review

Economic growth would be defined as the intensification in the goods and apparatuses, which would be used for the needs of humans in any sector or country. A process would be discus in the study to define the growth rates of the economy, which includes the inquiry of real profit in GDP and relates it with GDP rates of the previous year, which symbolizes the market correspondent of all measurable values which were developed by the economy. The leading three-pointers of economic growth are investment accretion, scientific developments, and intensification in the inhabitants and employees. Resources amassing were considered the elementary vibrant of profitable progression[10]. The GDP growth rates of Jordan between the era of 2000 to 2009 were an average of almost 7%, but other than this from 2010 to 2016, the growth was decreased by up to 5 percent and remains only 2%. Moreover, the total population debit of

Jordan's enhances up to the rate of increased economic growth. This would be bringing out as the debt-to-GDP with the percentage of 85% at the end of 2016, associated with just about 51% in 2010. [8]

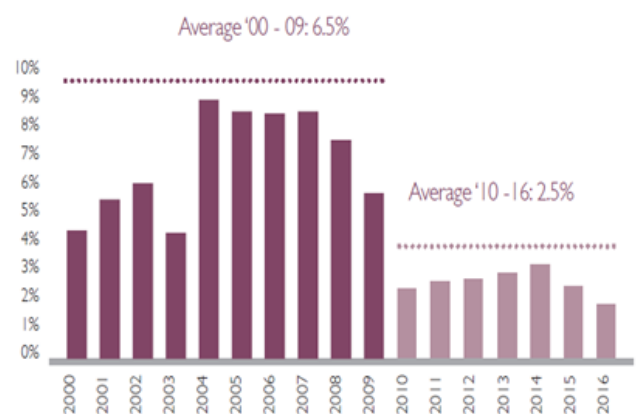


Figure 1: Source: Central Bank of Jordan

The most significant situation to meet the guaranteed progress has the existence of appropriate investments. And the understanding of a venture is contingent on the proliferation in investments to be produced from the profits. As the additional indicator of economic growth, technical advances can be defined as the entire organization of statistics, association, and methods requisite in the construction progressions[9]. It would be possible just with the help of ICTs techniques, which achieves the outcomes by using the same quantity, which was used in the inputs in the process of production. Here are the top five contributions which were made by Jordan's in the government sector of GDP as well as industrialized, finance, tourism, hospitality, and transportation, respectively. Furthermore, Jordan subsidized a lot in the GDP, and they also contributed to employment sectors as well as Jordan provide constant currency and help a lot in the export of Jordan[11]. To strengthen the economic growth of Jordan, progression strategies would be given in the subdivisions to encompassing the arrangement of policy reforms, tasks of government, and stock prospects that were presented in this study[12]. These intermediations would be able to realize the potential growth of Jordan, which was then turned into practical contentment of the IMF's EFF program[13]. As was described in the picture above, the current economy of Jordan has been presented by the finance and services of the government. Except for all these, the essential growth of engine in the coming years the government remains under pressure for more financial contraction[14]. And this may move to almost 55% of the economy, and this mainly paid attention to productive areas to increase the growth in the marketplace[15].

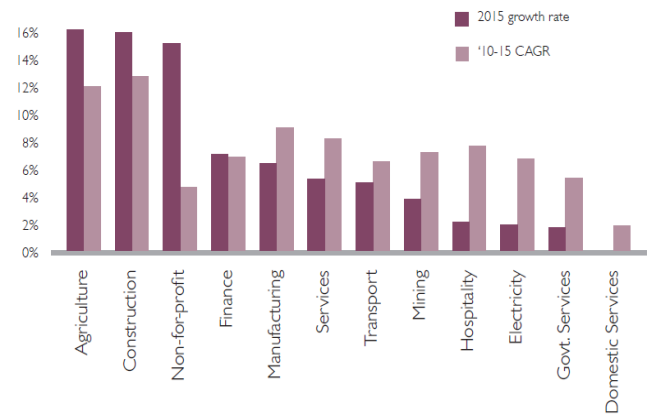


Figure 2: [5]

And this will definitely bring savings in the areas of employment. And this financial indicator is the reason behind the enhancement in population as well as in the workforce[16]. The increase in society will result in the same rise in employment, and this would be the primary motivator of growth in the economy[17].

Theories on economic Growth

In this theory, it was defined that through which sources the economic growth was changed in the history of economics. The strengthening enhancement in the state's treasury had been taken, based on mercantilism, and the situation that distributes the volume was most significant then that of the expected value of import was the general rule for growth[18].

[2]The UNCTAD Secretariat referred a form to all state members of CSTD and UN Regional Commissions petitioning efforts for research, learned lessons, and superlative rehearses on the influence of speedy scientific modification in justifiable improvements. Three UN regional commissions and eleven countries answered all the applications that were included in the case study of SDGs such as (sophisticated work and economic growth, health, changes in substructure, industry, education, agriculture, and supportable societies and cities)[19]. Transversely an assortment of technologies including 3D printing, artificial technology,

nanotechnology, big data and robotics, biotechnology, and block chain. And these techniques were based on the results that give the additional study which was accompanied by the UNCTAD Secretariat; this section offers samples of in what way rapid scientific modification can subsidize to justifiable progress. The idea of continuing the natural order[3].

As the primary division of the frugality, agronomy provides the means for growth[20]. This would partially accept the significance of productiveness and did not give any reputation to the market. The primary purpose of the theory was to produce the significant growth of the economy at the end of the 18th century and the start of the 19th century, and the approach was presented by A. Smith, R. Malthus and D. Ricardo[21]. This theory is based on the perspective of the increased population was obtain from the income level per person. The classical growth theory was prominent when most of the people worked on the breeding of animals in agriculture in the 1770s.[22] The operational circumstances of the individuals working on the reproduction of animals in the field of agriculture were exacting and the level of income was low[10][23]. In the meantime, productivity was also increased in agriculture by using these advanced technologies. And these techniques also cause an increase in the process of production, and this increase in production also enhances the number of employees in the agriculture field. And these changes resulted in people starting the migration from villages to cities, and it seemed as enhancements in the wealth. On the other side, the classical economist has faith that an increased in the level of wealth would not remain constant for the individual. And it was also observed the decreased in the birth rate in the last few years in western countries, and the price of the increasing population was slow down. And many other reasons were also presented as a chance of an increase in workforce and salary rates for women. The outcome of this will be received as declining

in the population rates of increased expenditures needed to raise a child and this will cause families to have fewer children. This will also lead to a decline in birth rates[24]. The difference between relation and growth rate of population and growth rate of original income provides the significances, and not to confirm the opportunities of classical economist. As it was stated according to the principle of growth rate the new-classical theory of technological revolution caused due to an increase in capita per person would be referred to as the funds per person which encourage the person and persuade toward investments and savings and this would b result in as causes an increase to actual GDP[25]. If the transference of scientific techniques finishes, the process will automatically be stopped[26]. The Schumpeter is the one who presents the framework regarding the above concept and from then he was known as the First economist. And he was the First who secure the idea of advanced technologies, and its expansion would have a positive impact on the growth of the economy. This concept of Schmpeter would be put forward. It can be taken as an evolutionary process in the invention of innovative demolition and this destruction weakens the sectors related to the development of new technologies and innovates new industries in the market of the economy. And this procedure is associated with scientific advancement and this would be defined as the structural changes in economic growth[27]. According to the perspective of Schumpeter, technology can be referred to as an exterior concept and this has been appraised by the neo-classical method. The industries purchase these technologies for them to monitor the effectiveness of this technological advancement. so that, Schumpeter thinks and expand these sectors of technologies and then define the originality of concept, as the utilization of the latest scientific method in the making of products. As well as they also contain some different procedures such as the creation of new products and launching the latest markets.[5]

. And these most recent markets contribute a lot to inventing new technologies, would also be benefited for the organizations who were searching for new ways for their raw materials[27]. All the above mention are the reasons which were affecting the techniques and as well as it also creates hurdles in the production of products. And this will also include the manufacturing process of firms, and the capability of the unit of output of raw material, size of the targeted content to supply in the market, quantity, and quality of used energy should also be measured, nature, scope and volume of the business which was generated as in the result of input would be received as the necessities of moderate-furnished material[6], and the manufacturing level of the structure provides the facilities and leave their mark on the country in which they developed the technology.

Estrangement of workforce and Technology

Despite all the questions of occupation and salaries, the scientific methods bring revolutions and uncertainties about the nature of work and the Estrangement of the workforce.[9] Before the rebellion of the industry, and between the commending the values of specialization. As Adfam Smithy proposed the Admonished against the effects of the process[28], as Adam wrote in his book, "The Man whose whole life is spent in performing a few simple operations. generally, becomes as stupid and ignorant as a human creature can become." Karl Max knows more than Smith as the criticizers of industrialization, disputed that the concept of a consumerist system isolates the person from himself and also from others as well. In the Manuscript of philosophical and economic of 1844, Mark wrote, "The height of this enslavement is the only a worker and he continues himself as a mortal subject, and this would only a physical subject and pertained himself as he was the single worker. This concept of individualism was treated persons as they were devices who were working in the machine.

Moreover, Thomas reflected in his idea about Jefferson's rosy opinions about the "yeoman farmer" provide the basis for democracy: "Those who employment on the ground are the who were chosen by God, whose breasts he has made his strange payment for extensive and unaffected benefit."

Developed Country made transference of technology for the developing countries, to determine the effect of insufficient production of products and disparity of proceeds in these underdeveloped countries. The technique capital-intense would be transported in contradiction of high expense in established countries, and this will then result in unemployment. As well as on the other side, the country needed the well-experienced workers for their organization. And select the workers who provide the country with the mechanical volume. And the undeveloped countries required to have ICRs technologies to get better the manufacturing of products and trained their employees on how to operate these technologies to enhance the quality work in the Firm. This revolution can be just made for western countries because they are creating problems[9]. And another purpose of this study is to facilitate modern societies to agreement monetary and social progress in improving the level of prosperity.

The Concept of Real-Estate Market

The market is considered as an integrated economic and commercial process. Taking into account the diverse human needs which cannot be achieved individually. As a result, the cooperation between the individuals is considered as a necessity in order to provide their needs and necessities. Real-estate market is defined as a market for selling and buying housing stock which is not only the house we live in, but also the agricultural lands, such as farms, gardens, and fish farms, or deserted, or prepared

for building such as residential real-estates that are represented in villas, palaces, buildings[3].

Real-estate market is considered incompetent market due to its contradiction with the

competent market in terms of the following issues:

Jordanian expatriate's remittances during the period of (1990-2015)

Year	Transfers Million Jordanian dinar	The growth In expatriates Remittances	The remittanc es Of gross Domestic Product	The Remittances Ratios to Foreign reserves
1990	331.8	-	12.0	108.5
1991	306.3	-7.7	10.4	34.9
1992	573.1	86.8	15.9	62.4
1993	720.7	25.8	18.6	173.9
1994	763.7	2.9	17.5	252.5
1995	871.7	14.1	18.5	287.7
1996	1094.8	25.5	22.3	221.5
1997	1173.5	7.2	22.8	97.8
1998	1093.8	-6.8	19.5	131.9
1999	1179.8	7.9	20.4	83.6
2000	1177.3	0.0021-	19.6	60.1
2001	1283.3	9	20.2	70.2
2002	1362.3	6.2	20.1	54.9
2003	1404.5	3	19.4	41.8
2004	1459.6	3.9	18.0	42.7
2005	1544.8	5.8	17.3	45.9
2006	1782.7	15.4	16.7	41.2
2007	2122.5	19.1	17.5	43.6
2008	2242.0	5.6	14.4	40.8
2009	2214.2	-1.2	13.1	28.7
2010	2247.3	1.5	11.9	25.9
2011	2152.1	-4.2	10.5	28.9
2012	2229.8	3.6	10.2	47.5
2013	2327.7	4.9	9.8	27.3
2014	2388	2.7	9.4	24.0
2015	2423.3	1.5	9.1	17.1

Table 1: Source electronic database for Jordanian central bank.

III. Methodology

Introduction

After the close relation between the investment in real-estate market and Jordanian expatriates' remittances has been theoretically clarified. The study such relation from the scientific aspect supports the theoretical aspect. For the purpose of achieving the objectives of the study.

Methods and Procedures

* The study has adopted both descriptive and quantitative analytical approach to study and examine the impact of Jordanian expatriate's remittances on investment in real-estate market in Jordan during the period 1990-2015 by the usage of annual data for the study variables.

Also, E-views was used to conduct standard analysis.

Figures showed indicates the general direction for data:

Table (2) the Findings of Bound-Test

Models	Calculated F	1%		5%		10%		K=6
		I(1)	I(0)	I(1)	I(0)	I(1)	I(0)	Resolution
(LGPOP, LRE, LRR, LP, LIN, LYCAPITA)I=F	1.66	3.99	2.88	3.28	2.27	2.94	1.99	No-integration
(LGPOP, LRE, LRR, LP, LIN, LYCAPITA)F	1.44	3.99	2.88	3.28	2.27	2.94	1.99	No-integration
(LGPOP, LRE, LRR, LP, I, LYCAPITA)LIN=F	9.35	3.99	2.88	3.28	2.27	2.94	1.99	Co-integration
(LGPOP, LRE, LRR, I, LIN, LYCAPITA)LP=F	5.52	3.99	2.88	3.28	2.27	2.94	1.99	Co-integration
(LGPOP, LRE, I, LP, LIN, LYCAPITA)LRR=F	8.05	3.99	2.88	3.28	2.27	2.94	1.99	Co-integration
(LGPOP, I, LRR, LP, LIN, LYCAPITA)LRE=F	5.90	3.99	2.88	3.28	2.27	2.94	1.99	Co-integration
(I, LRE, LRR, LP, LIN, LYCAPITA)LGPOP=F	14.66	3.99	2.88	3.28	2.27	2.94	1.99	Co-integration

The findings of the above mentioned Bound test indicate that some of the variables in the previous models have long term relations by comparing calculated f with borders.

The flexibilities estimation in the Long Turn:

The variables showed joint integration which, in turn, suggests the existence of balanced long term relationships among such variables. The flexibilities estimation in the long term has been used by employing autoregressive distributed lag model (ARDL) for economic slowdown periods. The findings are illustrated as below:

Table (3) The flexibilities result in long term equation for real-estate investment

Long Run Coefficients			
Dependent Variable: I			
(2, 2, 0, 2, 2, 2, 2)			Akaike info criterion (AIC)
Std. Error	ARDL	Prob.	ARDL
			Variable Coefficient
1142.04	3.356	0.0202	LGPOP 3832.70
2363.48	3.793	0.0127	LRE 8965.61
2233.66	0.759	0.4821	LRR 1695.34
4731.80	-0.626	0.5588	LP -2961.69
20215.10	-1.536	0.1850	LINF -31058.43
1235.96	7.613	0.0006	LYCAPITA 9409.69
3331.03	-9.934	0.0002	C -33089.30
Mean dependent var		3233.17	R-squared 0.99583
S.D. dependent var		2747.21	Adjusted R-squared 0.98080
Akaike info criterion		14.74	S.E. of regression 380.66
Schwarz criterion		15.67	Sum squared resid 724491.54
Hannan-Quinn criter.		14.98	Log likelihood -157.84
Durbin-Watson stat	2.54	F-statistic 66.28	
		Prob(F-statistic) 0.0001	

Table (3) indicates the estimated coefficients for the independent variables and cross in the long run. Taking into consideration that expatriates remittances on investment in real-estate sector

Flexibilities estimation in short term: There are not much explanations for short-term coefficients because the variables showed joint integration in the long run. However, short term flexibilities are estimated for the objective of detecting error correction criterion (Coint Eq(-1)). The findings of flexibilities estimation are indicated below:

Table (4) The findings of short term flexibilities for investment equation in real-estate market

Dependent Variable: I				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(I(-1))	1.65	0.21	7.97	0.0005
D(LGPOP)	660.41	986.05	0.67	0.5327
D(LGPOP(-1))	-2542.52	767.10	-3.31	0.0211
D(LRE)	20211.61	2839.80	7.12	0.0008
D(LRR)	18756.04	3283.64	5.71	0.0023
D(LRR(-1))	8343.40	3212.28	2.60	0.0484
D(LP)	-30421.18	9308.03	-3.27	0.0222
D(LP(-1))	-38646.68	7473.27	-5.17	0.0036
D(LINF)	-37268.96	9660.16	-3.86	0.0119
D(LINF(-1))	-17600.05	7100.71	-2.48	0.0559
D(LYCAPITA)	18842.50	2869.94	6.57	0.0012
D(LYCAPITA(-1))	-22115.38	3209.49	-6.89	0.0010
CointEq(-1)	-2.28	0.28	-8.04	0.0005

Discussion

According to the findings of standard analysis to the equation which aimed at investigating the impact of expatriates' remittances on real-estate in Jordan during the period (1990-2015). The study has reached to the following findings:

Findings of real-estate market:

1-The findings show by testing the stillness of the time series model to the variables of the study that the whole study variables are stable at the first difference.2- The findings of joint integration analysis between expatriates remittances and investment in real-estate in Jordan the existence of integrated relationship between short term and long term by applying Bound Test. Also, the findings revealed that expatriate's remittances have a positive impact on investment in real-estate market in Jordan. The more Jordanian expatriate's remittances increased (1%), the more the investment in real-estate market in Jordan increased by the value of (8965.61).3- The findings of joint integration analysis between population rate and per capita income in real-estate in Jordan the existence of integrated relationship between short term and

long term by applying Bound Test. Also, the findings revealed that population rate and per capita income have a positive impact on investment in real-estate market in Jordan. The more Jordanian expatriates' remittances increased (1%), the more the investment in real-estate market in Jordan increased by the value of (9409.69).4- The previous findings investigating the impact of expatriates' remittances on investment in real-estate in Jordan pointed out that expatriate's remittances have a positive impact on investment in real-estate in Jordan. The findings of this study are commensurate with the following studies (Legeng Le, 2012; Koprencka,2011; Koprencka,2011).

Recommendations ICTs sector:

Scientific technologies can change the lives of individuals and the use of these technologies become the most popular Nowadays. And these technologies will play a practical impact on the lives of individuals and in the industries of the relevant country. This technological development also increases the growth rate of the economy. Besides this, this advancement can also bring a change, as they increased the wealth and revenue of the individuals. The main aim of this research is to identify the positive outcomes and its benefits to use ICTs technique in your firm, as this technique involves the submission of science specifically for industrialized or profitmaking determinations and practices the scientific methods and resources to attain a profitable or for the manufacturing determination and making "revolutions" in the creations of machinery. The different manufacturing processes would be used to enhance the fabrication of products as well as there quality and worth to compete with other industries in the Markets, moreover to improve the profit for the company.

Furthermore, different concepts would discover that explains the economic growth rate.

A process would be discussed in the study to define the growth rates of the economy, which includes the inquiry of real profit in GDP and relates it with GDP rates of the previous year, which symbolizes the market correspondent of all measurable values which were developed by the economy. And as well as theories suggested who support the concept of economic growth in any organization. According to the perspective of Schumpeter, technology can be referred to as an exterior concept and this has been appraised by the neo-classical method. The industries purchase these technologies for them to monitor the effectiveness of this technological advancement. so that, Schumpeter thinks and expand these sectors of technologies and then define the originality of concept, as the utilization of the latest scientific method in the making of products. The countries had to originate real assistance (growth) from industrial advances by supportive and circulating the constructive characteristics of this development and lessening its undesirable influences.



Dr. Qasem Hamouri is presently working Yarmouk university, Jordan. He has more than 30 years of teaching, and administrative experience. He has supervised more than 15 research scholars of various universities. He has attended several seminars, workshops and conferences at various levels. He has more than 30 research papers published in various national and international journals. His area of interest in teaching and research includes Portfolio Management, economic Financial Management, International Financial Management, and Marketing Management

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